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ABSTRACT

An attempt to direct the attention of the public school to the measurable dimensions of the affective domain is reported. A seven-step plan is provided for implementing an educational program in the affective domain: Step 1, evaluator develops and states affective goals; Step 2, evaluator determines appropriate behavioral objectives to measure goal achievement; Step 3, evaluator determines a suitable standard of student performance; Step 4, teachers instruct students about the values related to behavioral goals; Step 5, evaluator collected data on outcomes; Step 6, the data are interpreted by comparing results to the criteria of performance; Step 7, evaluator decides if program has been successful. Three major areas comprise the measurement dimensions: self report, record, and observational data. Appendices include a condensed version of the affective domain of the taxonomy of educational objectives, suggested behaviors denoting scientific literacy, and examples of evaluation instruments for the affective domain. (DJ)

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THE DIMENSIONS OF MEASUREMENT OF THE AFFECTIVE DOMAIN

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of School Self-Renewal

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THE DIMENSIONS OF MEASUREMENT OF THE AFFECTIVE DOMAIN

Educators, critics of education, students, teachers, and parents are demanding that educational systems "humanize" and fully recognize the affective nature of the learning endeavor. The American public school system, compared with any other educational system in the world, has an unexcelled record of providing the best education for the greatest number of students. Strangely enough, it presently is the case that the best is unacceptable, and a strong move must be made in the direction of human reactions and responses to content, subject matter, and all other areas of public education.

Early in the 1960's it was recognized by some that a greater effort would have to be put forth to understand and evaluate what was happening in American schools within the "affective domain" of education.

As stated by Krathwohl et al (1964):

> It is not entirely fair to imply that evaluation of the attainment of affective objectives is completely absent from the regular activities of schools and teachers. Undoubtedly almost every teacher is on the alert for evidence of desirable interests, attitudes, and character development. However, most of this is the noting of unusual characteristics or dramatic developments when they are almost forced on the teacher's attention. What is missing is a systematic effort to collect evidence of growth in affective objectives which is in any way parallel to the very great and systematic efforts to evaluate cognitive achievement (p. 15).

Also, Krathwohl et al point out that affective objectives do not "mystically appear" upon the teaching of cognitive behaviors:

> However, there still persists an implicit belief that if cognitive objectives are developed, there will be a corresponding development of appropriate affective behaviors. The evidence suggests that affective behaviors are provided for students much the same as cognitive behaviors develop from appropriate learning experiences (p. 20).

As a result of the study of Krathwohl et al a taxonomy of educational objectives was developed for the affective domain. The categories and subcategories of the taxonomy are:

1.0 Receiving (attending)

- 1.1 Awareness. The learner is conscious of something; he need not attend to it, but is merely aware that it is there.
- 1.2 Willingness to receive. The person attends to something and does not attempt to avoid it.
- 1.3 Controlled or selected attention. The person differentiates a stimulus from his perceptual field.

2.0 Responding

- 2.1 Acquiescence in responding. The person complies with the expectation, or request, of another.
- 2.2 Willingness to respond. The person displays a capacity for voluntary activity. He acts because he himself wishes to do so.
- 2.3 Satisfaction in response. He feels pleasure at his response. Now there is an emotional attachment to his activity.

3.0 Valuing

3.1 Acceptance of a value. The learner ascribes worth to a phenomenon, behavior, or object.

3.2 Preference for a value. The learner not only accepts a value, but he seeks it out, he wants it.

3.3 Commitment. The learner acts to further the thing valued, to extend his involvement with it. Loyalty and conviction are characteristic of this category.

4.0 Organization

4.1 Conceptualization of a value. Abstraction enables the learner to perceive how this value relates to those that he now holds, or those that he is developing.

4.2 Organization of a value system. The learner is able to accommodate a complex of values, even disparate values, and to form them into an ordered relationship. This relationship ideally should be harmonious and internally consistent.

5.0 Characterization by a value or value complex

5.1 Generalized set. There is an internal consistency to the learner's system of attitudes and values. It may be a predisposition to act in a certain way, or an unconscious set, or orientation, that guides action without conscious forethought. The generalized set permits the learner to reduce a complicated environment to manageable parts.

5.2 Characterization. The learner develops a consistent philosophy of life.

Appendix A contains a condensed version of the affective domain which is quoted from The Taxonomy of Educational Objectives, The Affective Domain, Krathwohl et al (1964). The taxonomy does not have a one to one correspondence with terms commonly employed by educators, i.e. appreciations, sentiments, fellings, judgements, attitudes, and interests. Nunnally (1967) organizes some of these terms into the following patterns:

1. Judgement covers all those types of human statements where there is a correct response. The respondent's judgement can be compared to verifiable standard, as when a student judges that two + two = four, or as when a student in physical science judges the rate of fall of a lead ball. Judgements are classified in the cognitive domain, not the affective domain.
2. Sentiment is the word used to cover all responses concerning personal reactions, preferences, interests, attitudes, and likes and dislikes. This is a personal reaction, and it would be a statement of sentiment if a person stated, "I like ice cream." Sentiments can be subdivided into three overlapping categories:
    a. Interests: interests are preferences for particular activities. An interest is a behavioral tendency to voluntarily engage in a certain activity. Example: "I enjoy keeping a stamp collection."
    b. Attitudes: attitudes concern feelings about particular social objects, physical objects, types of people, particular persons, social institutions, government policies, and others. Example: "All public schools should be fully integrated."

c. Values: values concern preferences for "life goals" and "ways of life," in contrast to interests, which concern preferences for particular activities. Example: "Service to others is more important to me than personal ambition."

In addition, I would like to add one category, beliefs. A belief is a statement which an individual feels and holds to be true. A belief may or may not have a basis in fact, but the individual does not question whether he is holding a sentiment or has made a judgement. For example, a football coach may firmly believe people are inherently competitive, while a parent may just as firmly believe they are not. The truth is, there is no evidence to "prove" either position, yet both the coach and parent hold their belief as "truth."

Krathwohl et al have attempted to indicate where selected words "fall" in the taxonomy of the affective domain. In figure 1 the taxonomy is correlated with the words; interest, appreciation, attitudes, value, and personal adjustment.

Although the taxonomy of affective goals has been published since 1964, few public schools have been able to operationalize the evaluation of affective goals. Student and teacher surveys are becoming more common, and some school districts have attempted to institute the assessment of vandalism, voting records, and library records as measures of the affective domain. The Instructional Objectives Exchange (1971) has produced one set of affective objectives and instruments for measuring those objectives. The National Science Supervisors Association has produced a fairly comprehensive set of behavioral objectives in the affective domain, and has produced

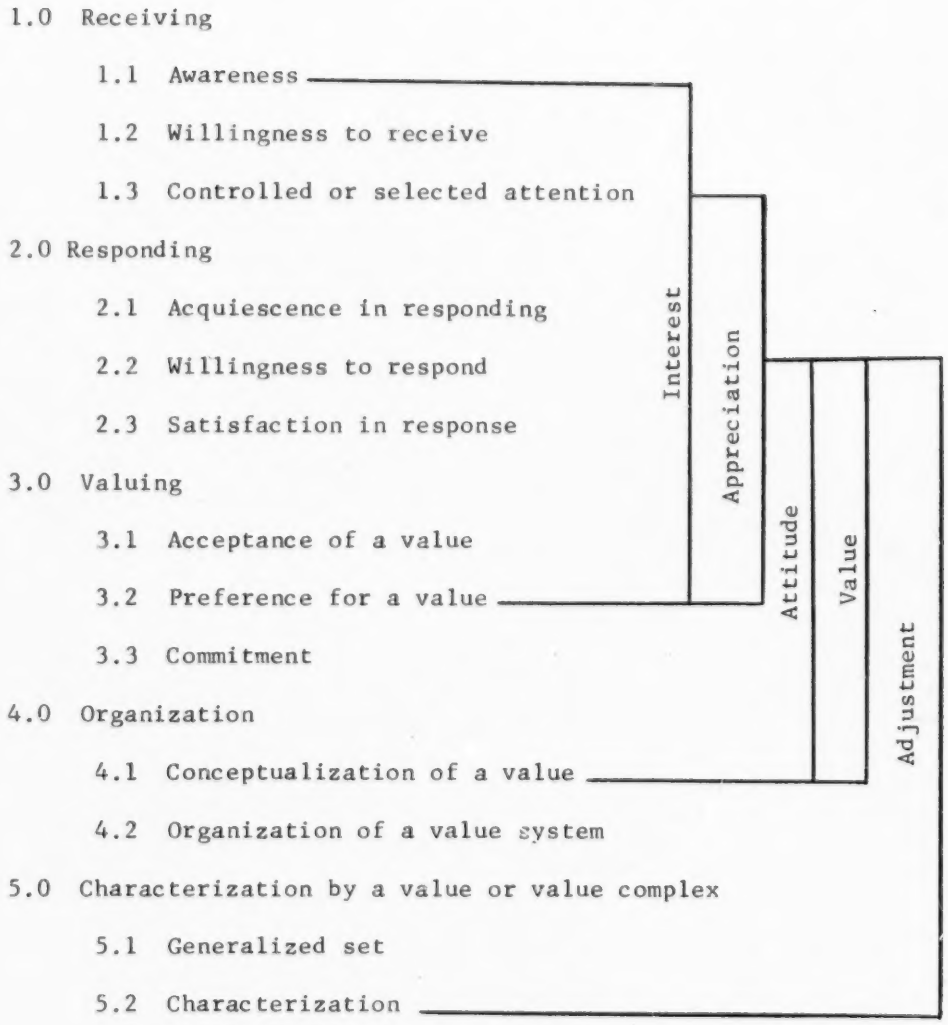

Figure 1. The range of meaning typical of commonly used affective terms measured against Taxonomy continuum.

a suggested evaluation procedure for these goals (Eiss & Harbeck, 1969). Their goals for science, placed in the Krathwohl et al framework, is reprinted in Appendix C.

One of the best sources of information on the measurement of many of the aspects of the affective domain is the book Attitude Measurement, edited by Gene Summers (1970). This set of papers presents a detailed analysis of various theories of attitudes and techniques of attitude measurement.

The sum total of these efforts to date have not produced a comprehensive set of objectives and their measures for public school use.

This paper is an attempt to direct the attention of the public school to the measurable dimensions of the affective domain, in a hope that a better understanding of the dimensions will stimulate the production and use of appropriate measurement tools for affective goals and objectives. Throughout this paper reference will be made to an "evaluator" who develops and uses assessment instruments. By evaluator I mean anyone or any group which is interested in using some objective method of determining conditions within a school. The evaluator referred to in this paper may be a principal, teacher, student, parents committee of the PTA, evaluation committee within the school, professional evaluator within the school, or a professional evaluator brought into the school as an outside resource.

A Plan for the Evaluation of Affective Goals

Figure 2 illustrates a simple plan to implement the evaluation of affective goals. At Step 1, the evaluator (any person or group) develops and states the affective goals of the school. These goal statements may be written in conceptual terms, rather than behavioral terms. During Step 2,

the evaluator determines appropriate methods of measuring the goals set in Step 1. Step 2 operationalizes the conceptual goals set in Step 1, and Step 2 criteria should be stated in strictly behavioral terms. It is in this step that the "behavioral objectives" for each affective goal are stated. For example, the school may set an affective goal of: "The students will value the school building as if it was their own property" (Step 1). Next, the evaluator will have to determine what he is trying to measure (Step 2). In this case, let's assume that this school is an inner city school, and the evaluator decides to use vandalism as the criteria for his goal. He knows there are good records on the number of windows replaced per month in his school building. In addition, he knows that the school is fenced in, and most windows are broken from the playground or from inside of the school. His criteria of measurement (Step 2) for his goal (Step 1) becomes: the number of panes of glass replaced per month. He then must decide what a suitable standard of performance would be for the students (Step 3). He decides that a suitable standard of performance would be a reduction in the number of panes of glass broken by 5% per months for 3 months.

In Step 4 a program is developed and instituted to attempt to instruct the students that the school building they live in was built for them. Teachers spend at least a few minutes a day pointing out the fact that the community built and supports the school for them. Students are taught how to care for the building, and how much it costs to replace broken and damaged portions of the building. Posters are placed on the walls telling the same story. Students are rewarded for picking up trash and keeping the halls clean. The principal holds an auditorium meeting

for the whole school to tell them what a good job they have been doing and how clean the halls look. In Step 5 the evaluator collects data from maintenance records on how many panes of glass have been broken per month since the start of the program. He determines if there has been a decrease in the number of broken windows since the start of the program. This data is interpreted by comparing the results to the standards and the criteria of performance (Step 6). The evaluator decides (Step 7) if the program has been successful in reaching the goal determined in Step 1. If the program has not been successful, the school must institute a new instructional program in an attempt to find new rewards for students who display appropriate behavior. Using this plan, the evaluator has an affective measure of the effectiveness of the program to reach the goal of changing the attitudes of the students toward their school building.

The simple plan presented in Figure 2 is a method of utilizing data to make school decisions. The data utilized in the plan may come from a number of sources, and the rest of this paper is devoted to documenting the dimensions of the data sources in the public school.

Dimensions of the Affective Domain

Although this paper does not attempt to put forth a comprehensive theoretical base for the measurement of the affective domain, it does make the assumption that the domain can be completely and fully described in behavioral terms; and covert, internalistic, mentalistic, constructual interpretations of feelings and attitudes are of little or no value to the evaluator. This is not to deny their existence, but to recognize at this point in time the scientific value of a working hypothesis (affective domain = overt behaviors) over a theoretical hypothesis (affective domain = covert behaviors).

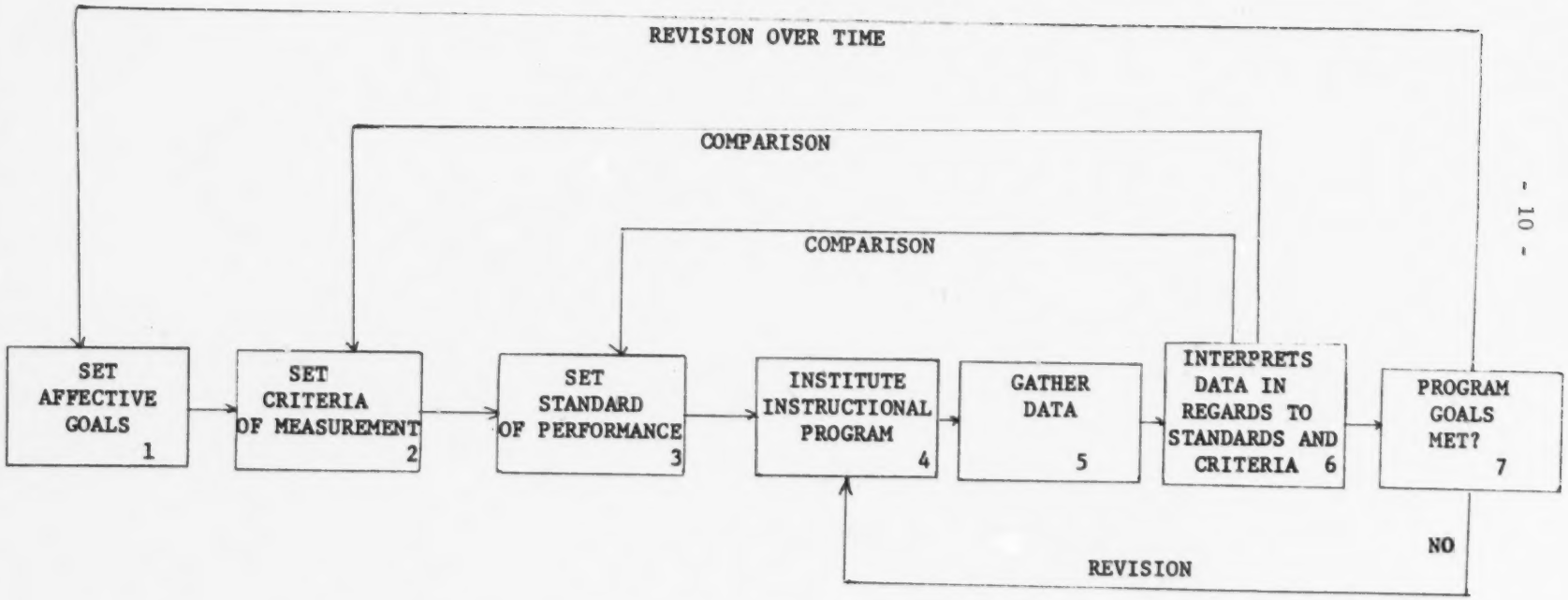

Figure 2. Plan to implement affective evaluation

I would like to mention that the validity of the traditional ideas about attitudes are under serious criticism. The assumption is often made that attitudes and beliefs cause the behaviors with which they are associated. Recent research indicates, however, that the direction of causality may be reversed. The self-descriptive statements that typically comprise the definitions of attitudes and beliefs, are found to be simple descriptive statements of the behaviors the subject has seen himself engage in in the past. It is suggested that self-descriptive attitude statements are simply a "cumulative reflection" of an individual's prior behavior and the conditions under which the behavior took place (Daryl Bem, 1967).

Regardless of theoretical considerations, three major areas comprise the measurement dimensions: 1) self report data, 2) record data, and 3) observational data.

DIMENSION ONE -- Self Report Data

This data consists of information derived from the target population through the act of asking the respondents to report their interests, attitudes, values, and beliefs. There are a number of dimensions to this area, and they are illustrated in Figure 3.

Response Mode. The respondent can be asked to respond anonymously or be named. In many cases, i.e., in an authoritarian school system, the anonymous situation is clearly desirable. The investigator may go some lengths to preserve anonymity, as when a teacher is asked to leave the room while an anonymous survey is administered by a student, sealed, and immediately mailed to an evaluator. In other cases "blind interviews" or taped comments can be obtained under anonymous conditions. If there are reasons for named reports (e.g. correlations with other data) the investi-

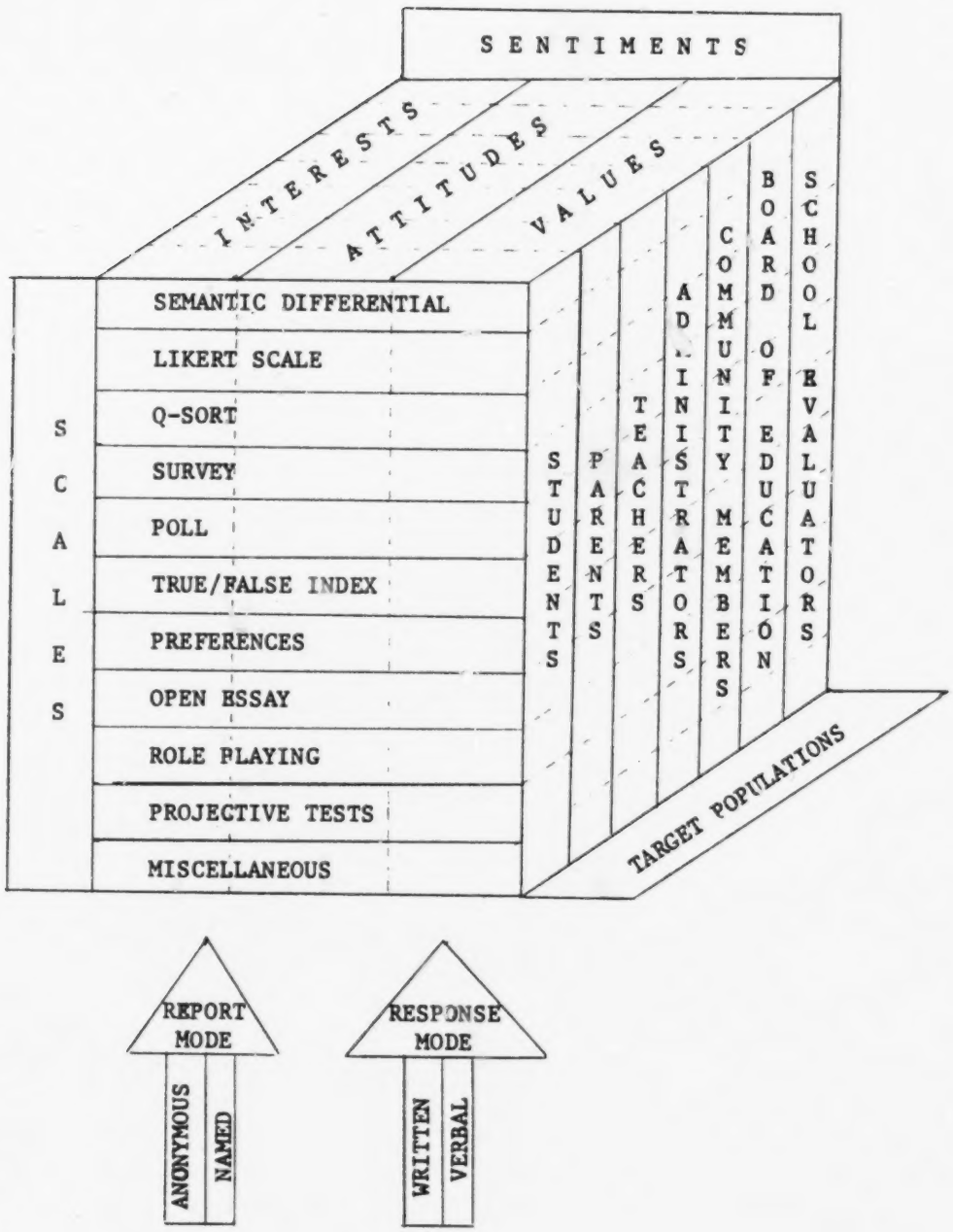

Figure 3. The dimensions of the self-report data pool.

gator may assign a code number to the respondent. In general, there is little reason to request respondents to identify themselves by name, especially in the setting of a potentially repressive educational system.

Report Mode. Self report data is most commonly written data, although two of the measures (interview and role playing) consist of verbal data. Although written data is easily tabulated and processed, the value of the verbal interview by a skilled and sensitive evaluator should not be overlooked.

Target Populations. It suffices to mention the target populations may include the following groups:

A. Students
B. Teachers
C. Parents
D. Administrators
E. Community Members
F. Board of Education Members
G. School Evaluators

Scales. The number of methods of assaying school sentiment is larger than commonly thought by the evaluator or school practitioner. It is my opinion that there has always been plentiful ways of determining school sentiment; but a strong belief is prevalent in public schools that there is no reason to ask students (and others) to express their feelings about school. To quote one chemistry teacher: "School is a place to learn facts. Who cares whether they like it or not." Of course more and more people care, and tools can be devised to determine whether students "like it or not."

"Scales" are the vertical dimension of Figure 3. This dimension represents the methods and instruments which can be employed to scale a sentiment. The word "scale" refers to the fact that evaluation procedures

can be used which place a number value on an attitude, interest, or value, or the scale can give an indication of the degree of the attitude being measured.

1. The semantic differential: This is a very useful and widely used scale which employs ratings of concepts with a number scale anchored on the ends by contrasting adjectives. For example, the concept of "principal" can be evaluated using the following semantic differential scale:

PRINCIPAL

INEFFECTIVE	1 2 3 4 5 6 7	EFFECTIVE
FOOLISH	1 2 3 4 5 6 7	WISE
WEAK	1 2 3 4 5 6 7	STRONG
DEMOCRATIC	1 2 3 4 5 6 7	AUTHORITARIAN
LIBERAL	1 2 3 4 5 6 7	CONSERVATIVE
USEFUL	1 2 3 4 5 6 7	USELESS

In this example, the teachers of a staff could be asked to express their attitudes toward the principal. They would make a check mark on the scale, indicating the degree of agreement they have with the adjectives listed. The responses of the teachers could then be summed and a mean determined, and a single number assigned to each of the adjective pairs. In this way, the concept "principal" would be scaled on the various pairs.

For additional information on the semantic differential refer to Nunnally, (1971), pages 535-544, and Summers, (1970), pages 235-253. An example of a semantic differential is given in the Appendix C.

2. The Likert Scale utilizes the approach of having the respondent respond to a statement by indicating the degree of agreement or disagreement with the statement. This type of scale is widely employed in rating

scales. The agreement/disagreement scales are relatively easy to construct, easy to understand, and the results are rather easily interpreted. The agreement/disagreement scale has high validity for reported attitudes, although reported attitudes have not been shown to be valid measures of other behaviors.

A typical set of Likert-type scales would be:

I think the principal is doing a good job.	AGREE	1	2	3	4	5	DISAGREE
The principal is a very helpful person.	AGREE	1	2	3	4	5	DISAGREE
The principal knows his job well.	AGREE	1	2	3	4	5	DISAGREE
The principal's primary task in this school has been to keep order.	AGREE	1	2	3	4	5	DISAGREE

As with the semantic differential, the responses of teachers to these statements could be summed to give a numerical "principal efficiency" rating. Perhaps a better name for the above scale would be; "The teachers' attitude toward their principal." Of course, scales could be devised to indicate students' attitudes toward English, math, teachers, and the school. For further information refer to Summers, pages 149-158. An example of a Likert Scale is given in Appendix C.

3. In the Q-Sort the student must make comparisons among different statements regarding preferences. For example, in an art evaluation, the teacher may want to evaluate preferences for statues. The teacher prepares a set of 100 pictures of statues from many different cultures from around the world. Rather than rate each photograph separately, the subject is asked to make comparative preferences by "sorting" the photographs into a specified number of piles. The end piles are designated "preferred least" and "preferred most," respectively. This is a "forced choice" circumstance.

During the choices, the teacher will find out a great deal about each student's preferences. For more information on the Q-Sort, refer to Nunnally, pages 544-557, and Summers, pages 255-256 and 263-264.

4. The survey is a method of personally interviewing individuals concerning their sentiments toward a specific topic or area. This method often is concerned with ascertaining the division of opinion in some population over some controversial public issue. In its simplest form, all that is necessary is to formulate the questions, decide who is to be questioned, ask the questions, and interpret the answers. The questions are based on the assumption that we can learn most about people's attitudes if we first ask them very broad, unstructured questions which allow them to express, freely and spontaneously, the aspects of the attitudinal area which are of most central concern to them as individuals. Such questions are referred to as open-ended because they do not limit the respondent to any fixed set of alternatives in replying. For a more complete discussion of the survey, see pages 535-559 in Newcomb, Turner, and Converse.

5. The poll is much like the survey, except that the poll is restricted to rather specific questions, and the responses of the poll are reported as a certain % for the item, a certain % against the item, and a certain % not answering the item. A typical poll item might be: "Are you in favor of or opposed to allowing students to leave the school campus during the lunch period?" Polls can be used to give valuable insight into the support a proposed change may or may not have.

6. The true/false index is employed by the Instructional Objectives Exchange to determine student sentiment. The scale consists simply of statements to which the student responds by labeling the statement as true

or false. In a modification of this instrument, the student labels statements with a yes or no response. A sample of a true/false index appears in Appendix C.

7. In a preference scale the student simply indicates whether he likes or dislikes target concepts. The Instructional Objectives Exchange uses this technique to have the student indicate those subjects he feels to be very good and very poor in terms of interest value, usefulness, and quality of textbooks and other materials. An example of a preference scale is included in Appendix C.

8. The open essay is similar to the survey, in that it allows the respondent a wide field for responses. The respondent may diverge into any argument to support his position, or may relate the original question to other areas related to the original area. For example, if the English department would like to evaluate the effectiveness in changing attitudes toward the American novel, the students in the program could be asked to write an essay on the topic: "The American Novel, Its Effect on My Future Reading." Of course, the anonymous/names response mode must be closely considered in such a situation.

9. Role-playing places the respondent into a "pretend you are someone else" situation, and can reveal many attitudes to the skilled evaluator. The respondents may or may not know their role-playing is being utilized as a part of an evaluation for the affective domain. For example; students may be asked to represent teachers and the principal, in a setting where the faculty is requesting that the dress code be abolished. In this manner, the evaluator would be able to assess many of the feelings and beliefs of the students, concerning the faculty and administrator.

Role-playing techniques are not commonly used in evaluation, but it may prove to be a fairly powerful tool. Additional information on the techniques of organizing a role-playing session may be found in Role-Playing Methods in the Classroom, by Chesler and Fox (1966).

10. Projective tests are commonly utilized to determine attitudes and beliefs of individuals. In these tests, the respondent is asked to "project" his feelings toward a picture, image, story, etc. The respondents personal reactions to the situation are then recorded and categorized according to some predetermined set of criteria and standards. The most commonly known projective test is probably the Rorschach test, in which the respondent projects his feelings toward "symbolic" ink blots.

I would agree with Nunnally (1967, pages 496-502) that projective tests do a rather poor job of measuring personality traits, they have, at most, a low level of validity, and have unacceptably low reliabilities. In summary, the projective test is of no value to the evaluator of the affective domain. It is included in the self-report dimension only because it presently is utilized by some investigators, and is a commonly known device for measuring personality traits.

11. Other miscellaneous devices may be employed to determine student sentiment. The Instructional Objectives Exchange devised an instrument, "Headlines in the News," which has the student rate titles of news articles in order of interest. This instrument appears in Appendix C. It is clear that the "rating techniques" of having the students place various aspects in the school into rank order would be of value. For example, the student could be asked to rank order various sports, in order of decreasing interest, or rank order school activities in order of decreasing value. In the instrument, "High School on TV" the Instructional Objectives Exchange

presents to the student twelve hypothetical situations in multiple choice form, each with three alternatives; some of the alternatives present favorably, and some unfavorably, the school social structure and climate. Students select the alternative which is most realistic, based on their own school experiences. In this instrument it is assumed that from the alternatives a student selects in these hypothetical situations, his attitude toward the social structure and climate of his own school may be inferred. Aspects of social structure and climate considered in developing the items include the administration, rule structure, openness of the administrative system, and availability of extra help. The "High School on TV" is reproduced in Appendix C. Other instruments produced by the Instructional Objectives Exchange are: "If You Had a Visitor," "Imagine That," "Persons and Places," "A Picture Choice," "Take Your Pick," and "Task Completion." The diversity of these instruments demonstrates that some creativity and interest in creating a measurement tool for the affective domain can produce a variety of instruments. You are limited only by your own interests.

DIMENSION TWO -- Recorded Data

These data consist of all the information contained in the records of the school and community. These records lie mainly in the public schools, but may also be obtained from the public library, voting records, hospitals, court and police records, other schools, community centers, and local newspapers.

Record data. There are a number of goals which could be measured using record data. The following examples of goals are quoted from the Taxonomy of Education Objectives, Affective Domain. The goals are ran-

domly chosen from the taxonomy and no rank ordering of importance is intended.

Willingness to comply with health regulations.

Completes his homework.

Observes the traffic rules on foot, on a bicycle, or on another conveyance at intersections and elsewhere.

Visits museums when told to do so.

Reads the assigned literature.

Obeys the playground regulations without close supervision.

Looks for informational books dealing with hobbies or other topics in which he is interested.

Reads magazines and newspapers designed for young children.

Engages on his own in a variety of constructive hobbies and recreational activities.

Displays an interest in actively participating in research projects.

Practices the rules of conservation.

Willingness to be of service to the group of which he is a member.

Interests himself in social problems broader than those of the local community.

Sense of responsibility for participating in community activities.

Uses various art media for recreation.

Initiates group action for the improvement of health regulations.

Influences governmental and service agencies, commercial organizations, and mass communication media by expressing opinions in letters to them.

Develops for regulation of one's personal and civic life a code of behavior based on ethical principles consistent with democratic ideals.

Dimensions of record data. Almost any data which represents voluntary actions may be used as an assessment of the affective domain within the public school. For example, attendance at pep rallies is a good measure

of "school spirit," as long as attendance at pep rallies is completely voluntary. If students are free to attend or not attend, the percent attending the rally is a good measure of the feelings of the students toward that particular sport. If students are made to attend a pep rally (although the logic of forcing kids to a rally escapes me) there are only limited ways to use the rally as a measure of the students' feelings toward the sport (see Appendix A, Section 2.1, Acquiescence in Responding).

Other data which does not represent voluntary activities, i.e. attendance, homework, assemblies with forced attendance, may be used as affective measures, but only with due caution. What does it mean when a teacher reports he received 100% of the homework for the day? This could represent a "good affective setting" (enthusiasm) or a "bad affective setting" (coercion).

How an evaluator will use the various dimensions of recorded data will vary tremendously from situation to situation. But in each case the evaluator will have to state his affective goal, determine what he is trying to measure, and state a standard for acceptable behaviors. The following list summarizes the sources of recorded data for measuring affective goals.

Sources of classroom data.

1. Absenteeism: percent absent, percent absent without excuse.
2. Tardiness: percent tardy, percent tardy without excuse, repetitive tardiness.
3. Homework performance: percent doing homework, percent doing extra assignments, percent doing homework for no credit.
4. Stated rules: number of rules written down, type of rules (authoritarian vs democratic).

5. Enforced rules: discrepancy between written rules and student behaviors, actual rules enforced.

6. Discipline: number of occurrences, number of students referred to dean, number of suspensions, number of transfers due to discipline problems with a specific teacher.

Sources of school data.

1. Library: number and type of books checked out, number of books lost, number of mutilated books.

2. Volunteer activity: number of types of activities, number of participants, level of activity of participants.

3. Newspaper: number of letters to the editor, number of participants, type of articles.

4. Editorials: number of letters, types of letters, degree of freedom allowed to editors.

5. Student Senate: measures passed, importance of measures, number of candidates running for office, number of students voting.

6. Cafeteria: number of students eating food, amount and type of garbage, physical condition after lunch, discipline in cafeteria.

7. Assemblies: number in attendance (voluntary only), attention of audience, number of teachers needed to maintain order.

8. Pep Rallies: number in attendance (voluntary only), attention of audience, spirit of audience, number of teachers needed to maintain order, number of students leaving early.

9. Custodians: number of complaints, amount of trash in halls, number of broken chairs, amount of vandalism.

Sources of administrative data.

1. Stated rules: number of written rules, type of written rules (authoritarian vs democratic).

2. Enforced rules: discrepancies between written rules and student behaviors, actual rules of the school.

3. Complaints: number of complaints received from parents, from community, from students.

4. Discipline: number of cases sent to deans, number of dismissals, severity of cases.

5. Awards: number of awards earned by students, number of awards given by school.

Sources of extra-curricular data.

1. Clubs: number and type of clubs, attendance at meetings.

2. Athletics: number and type of athletics, number trying out, number of students attending games.

3. Projects: number and types of school projects, number participating.

4. Competitions: number and types of school, state, and national competitions, number of students competing.

5. Concerts: number of concerts, number of students in voluntary attendance.

6. Plays: number of plays, number of students involved, number of students in voluntary attendance.

7. Shows: number of shows, number of students in voluntary attendance.

8. Non-participatory sports: number of students attending sports events.

Sources of post-school data.

1. Drop outs: number of drop outs, level of drop outs, causes of drop outs.

2. Voting records: number of students voting in school, state, local and national elections.

3. Court records: number and type of convictions.

4. Police records: number and type of arrests.

5. Junior colleges: number of students entering, number succeeding.

6. Colleges: number of students entering, number drop outs, number of graduates, success of graduates.

7. Non-credit courses: number enrolled in non-credit courses.

8. Hospitals: drug cases, alcoholic cases, number of fights.

DIMENSION THREE -- Observational Data

The third major area for the collection and evaluation of data on the affective domain consist of information which can be gained by observation of the system in action. In this area no interaction with the system is undertaken, as was in the self-report area. If feasible, this data could be collected without the knowledge of the persons being observed. This area differs from the record data in that records are history, and observational data represents "current events." The data from this area can be "seen and heard." The area is illustrated in Figure 4. Summers (1970) devotes Section 5 of Attitude Measurment to the topic of direct observation techniques.

Target Populations. The target populations are the same as documented in Figure 2 on the dimensions of the self-report data.

Location. Observations can be made both in school and out of school. Observations can be taken in libraries, on street corners, and at community centers. Of course, many observational areas exist within the school setting, i.e., classrooms, the cafeteria, teachers' lounge, principal's office, etc.

Sensory outputs. Observational schedules can be constructed for all types of data. A classroom observation plan can be devised for observing the number of times students smile, yawn, look out the window, hang their head, etc. Tactile observation schedules can be constructed for student/student contact and student/teacher contact. For example, a good affective

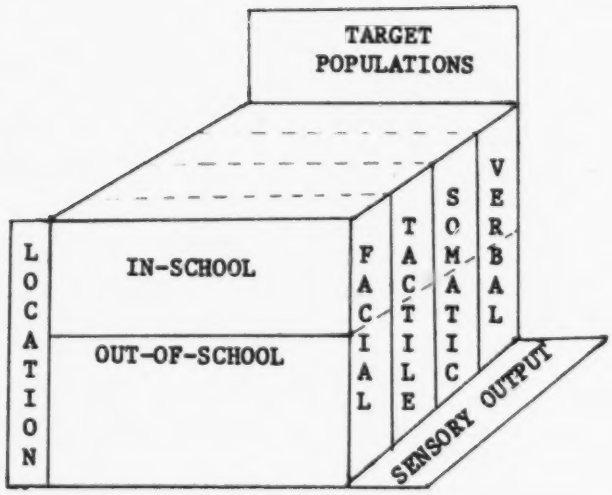

Figure 4. The dimensions of observational data.

goal might be: "Since touching is a part of being human, teacher/student contact is to be encouraged." A simple observation schedule would be the most effective means of determining if this goal was being met. Somatic observations refer to any observations of body posture. The observation of student and teacher postures will illustrate whether these people are energetic and dynamic or discouraged and unenthusiastic. Observation of verbal interaction will give data on the amount of interaction and degree of enthusiasm of interaction. Observation of verbal behaviors in the halls, cafeterias, teachers' lounge, etc., will tell much about the affective behaviors of the individuals within a school system. One method of observation is the teacher check list. In this format the teacher forms a check list of the behaviors to be evaluated, and records the occurrence or nonoccurrence of these behaviors (See Appendix C).

SUMMARY

Although examples were given which operationalize some portions of the evaluation of affective goals, the major emphasis of this paper is to establish the dimensions of the affective domain so that more evaluations of affective behaviors will be undertaken. It is my hope that the paper will provide a simple empirical framework for the production of measurement tools and devices. It is also my intent that these tools and instruments will lead to a great awareness of and sensitivity to the feelings and sentiments prevalent within the public school system.

APPENDIX A

A CONDENSED VERSION OF THE AFFECTIVE DOMAIN OF THE TAXONOMY OF EDUCATIONAL OBJECTIVES

A Condensed Version of the Affective Domain
of the Taxonomy of Educational Objectives

1.0 RECEIVING (ATTENDING)

At this level we are concerned that the learner be sensitized to the existence of certain phenomena and stimuli; that is, that he be willing to receive or to attend to them. This is clearly the first and crucial step if the learner is to be properly oriented to learn what the teacher intends that he will. To indicate that this is the bottom rung of the ladder, however, is not at all to imply that the teacher is starting de novo. Because of previous experience (formal or informal), the student brings to each situation a point of view or set which may facilitate or hinder his recognition of the phenomena to which the teacher is trying to sensitize him.

The category of Receiving has been divided into three subcategories to indicate three different levels of attending to phenomena. While the division points between the subcategories are arbitrary, the subcategories do represent a continuum. From an extremely passive position or role on the part of the learner, where the sole responsibility for the evocation of the behavior rests with the teacher--that is, the responsibility rests with him for "capturing" the student's attention--the continuum extends to a point at which the learner directs his attention, at least at a semiconscious level, toward the preferred stimuli.

1.1 AWARENESS

Awareness is almost a cognitive behavior. But unlike Knowledge, the lowest level of the cognitive domain, we are not so much concerned

with a memory of, or ability to recall, an item or fact as we are that, given appropriate opportunity, the learner will merely be conscious of something--that he take into account a situation, phenomenon, object, or stage of affairs. Like Knowledge it does not imply an assessment of the qualities or nature of the stimulus, but unlike Knowledge it does not necessarily imply attention. There can be simple awareness without specific discrimination or recognition of the objective characteristics of the object, even though these characteristics must be deemed to have an effect. The individual may not be able to verbalize the aspects of the stimulus which cause the awareness.

> Develops awareness of aesthetic factors in dress, furnishings, architecture, city design, good art, and the like.
> Develops some consciousness of color, form, arrangement, and design in the objects and structures around him and in descriptive or symbolic representations of people, things, and situations.[1]

1.2 WILLINGNESS TO RECEIVE

In this category we have come a step up the ladder but are still dealing with what appears to be cognitive behavior. At a minimum level, we are here describing the behavior of being willing to tolerate a given stimulus, not to avoid it. Like Awareness, it involves a neutrality or suspended judgment toward the stimulus. At this level of the continuum the teacher is not concerned that the student seek it out, nor even, perhaps, that in an environment crowded with many other stimuli the learner will necessarily attend to the stimulus. Rather, at worst, given the opportunity to attend in a field with relatively few competing stimuli,

---

[1]Illustrative objectives selected from the literature follow the description of each subcategory.

the learner is not actively seeking to avoid it. At best, he is willing to take notice of the phenomenon and give it his attention.

Attends (carefully) when others speak--in direct conversation, on the telephone, in audiences.

Appreciation (tolerance) of cultural patterns exhibited by individuals from other groups--religious, social, political, economic, national, etc.

Increase in sensitivity to human need and pressing social problems.

1.3 CONTROLLED OR SELECTED ATTENTION

At a somewhat higher level we are concerned with a new phenomenon, the differentiation of a given stimulus into figure and ground at a conscious or perhaps semiconscious level--the differentiation of aspects of a stimulus which is perceived as clearly marked off from adjacent impressions. The perception is still without tension or assessment, and the student may not know the technical terms or symbols with which to describe it correctly or precisely to others. In some instances it may refer not so much to the selectivity of attention as to the control of attention, so that when certain stimuli are present they will be attended to. There is an element of the learner's controlling the attention here, so that the favored stimulus is selected and attended to despite competing and distracting stimuli.

Listens to music with some discrimination as to its mood and meaning and with some recognition of the contributions of various musical elements and instruments to the total effect.

Alertness toward human values and judgments on life as they are recorded in literature.

2.0 RESPONDING

At this level we are concerned with responses which go beyond merely attending to the phenomenon. The student is sufficiently motivated that

he is not just 1.2 Willing to attend, but perhaps it is correct to say that he is actively attending. As a first stage in a "learning by doing" process the student is committing himself in some small measure to the phenomena involved. This is a very low level of commitment, and we would not say at this level that this was "a value of his" or that he had "such and such an attitude." These terms belong to the next higher level that we describe. But we could say that he is doing something with or about the phenomenon besides merely perceiving it, as would be true at the next level below this of 1.3 Controlled or selected attention.

This is the category that many teachers will find best describes their "interest" objectives. Most commonly we use the term to indicate the desire that a child become sufficiently involved in or committed to a subject, phenomenon, or activity that he will seek it out and gain satisfaction from working with it or engaging in it.

2.1 ACQUIESCENCE IN RESPONDING

We might use the word "obedience" or "compliance" to describe this behavior. As both of these terms indicate, there is a passiveness so far as the initiation of the behavior is concerned, and the stimulus calling for this behavior is not subtle. Compliance is perhaps a better term than obedience, since there is more of the element of reaction to a suggestion and less of the implication of resistance or yielding unwillingly. The student makes the response, but he has not fully accepted the necessity for doing so.

Willingness to comply with health regulations.
Obeys the playground regulations.

2.2 WILLINGNESS TO RESPOND

The key to this level is in the term "willingness," with its implication of capacity for voluntary activity. There is the implication that the learner is sufficiently committed to exhibiting the behavior that he does so not just because of a fear of punishment, but "on his own" or voluntarily. It may help to note that the element of resistance or of yielding unwillingly, which is possibly present at the previous level, is here replaced with consent or proceeding from one's own choice.

> Acquaints himself with significant current issues in international, political, social, and economic affairs through voluntary reading and discussion.
>
> Acceptance of responsibility for his own health and for the protection of the health of others.

2.3 SATISFACTION IN RESPONSE

The additional element in the step beyond the Willingness to respond level, the consent, the assent to responding, or the voluntary response, is that the behavior is accompanied by a feeling of satisfaction, an emotional response, generally of pleasure, zest, or enjoyment. The location of this category in the hierarchy has given us a great deal of difficulty. Just where in the process of internalization the attachment of an emotional response, kick, or thrill to a behavior occurs has been hard to determine. For that matter there is some uncertainty as to whether the level of internalization at which it occurs may not depend on the particular behavior. We have even questioned whether it should be a category. If our structure is to be a hierarchy, then each category should include the behavior in the next level below it. The emotional component appears gradually through the range of internalization categories.

The attempt to specify a given position in the hierarchy as the one at which the emotional component is added is doomed to failure.

The category is arbitrarily placed at this point in the hierarchy where it seems to appear most frequently and where it is cited as or appears to be an important component of the objectives at this level on the continuum. The category's inclusion at this point serves the pragmatic purpose of reminding us of the presence of the emotional component and its value in the building of affective behaviors. But it should not be thought of as appearing and occurring at this one point in the continuum and thus destroying the hierarchy which we are attempting to build.

> Enjoyment of self-expression in music and in arts and crafts as another means of personal enrichment.
> Finds pleasure in reading for recreation.
> Takes pleasure in conversing with many different kinds of people.

3.0 VALUING

This is the only category headed by a term which is in common use in the expression of objectives by teachers. Further, it is employed in its usual sense: that a thing, phenomenon, or behavior has worth. This abstract concept of worth is in part a result of the individual's own valuing or assessment, but it is much more a social product that has been slowly internalized or accepted and has come to be used by the student as his own criterion of worth.

Behavior categorized at this level is sufficiently consistent and stable to have taken on the characteristics of a belief or an attitude. The learner displays this behavior with sufficient consistency in appropriate situations that he comes to be perceived as holding a value. At

this level, we are not concerned with the relationships among values but rather with the internalization of a set of specified, ideal, values. Viewed from another standpoint, the objectives classified here are the prime stuff from which the conscience of the individual is developed into active control of behavior.

This category will be found appropriate for many objectives that use the term "attitude" (as well as, of course, "value").

An important element of behavior characterized by Valuing is that it is motivated, not by the desire to comply or obey, but by the individual's commitment to the underlying value guiding the behavior.

3.1 ACCEPTANCE OF A VALUE

At this level we are concerned with the ascribing of worth to a phenomenon, behavior, object, etc. The term "belief," which is defined as "the emotional acceptance of a proposition or doctrine upon what one implicitly considers adequate ground" (English and English, 1958, p. 64), describes quite well what may be thought of as the dominant characteristic here. Beliefs have varying degrees of certitude. At this lowest level of Valuing we are concerned with the lowest levels of certainty; that is, there is more of a readiness to re-evaluate one's position than at the higher levels. It is a position that is somewhat tentative.

One of the distinguishing characteristics of this behavior is consistency of response to the class of objects, phenomena, etc. with which the belief or attitude is identified. It is consistent enough so that the person is perceived by others as holding the belief or value. At the level we are describing here, he is both sufficiently consistent

that others can identify the value, and sufficiently committed that he is willing to be so identified.

Continuing desire to develop the ability to speak and write effectively.
Grows in his sense of kinship with human beings of all nations.

3.2 PREFERENCE FOR A VALUE

The provision for this subdivision arose out of a feeling that there were objectives that expressed a level of internalization between the mere acceptance of a value and commitment or conviction in the usual connotation of deep involvement in an area. Behavior at this level implies not just the acceptance of a value to the point of being willing to be identified with it, but the individual is sufficiently committed to the value to pursue it, to seek it out, to want it.

Assumes responsibility for drawing reticent members of a group into conversation.
Deliberately examines a variety of viewpoints on controversial issues with a view to forming opinions about them.
Actively participates in arranging for the showing of contemporary artistic efforts.

3.3 COMMITMENT

Belief at this level involves a high degree of certainty. The ideas of "conviction" and "certainty beyond a shadow of a doubt" help to convey further the level of behavior intended. In some instances this may border on faith, in the sense of it being a firm emotional acceptance of a belief upon admittedly nonrational grounds. Loyalty to a position, group, or cause would also be classified here.

The person who displays behavior at this level is clearly perceived as holding the value. He acts to further the thing valued in some way,

to extend the possibility of his developing it, to deepen his involvement with it and with the things representing it. He tries to convince others and seeks converts to his cause. There is a tension here which needs to be satisfied; action is the result of an aroused need or drive. There is a real motivation to act out the behavior.

> Devotion to those ideas and ideals which are the foundations of democracy.
>
> Faith in the power of reason and in methods of experiment and discussion.

4.0 ORGANIZATION

As the learner successively internalizes values, he encounters situations for which more than one value is relevant. Thus necessity arises for (a) the organization of the values into a system, (b) the determination of the interrelationships among them, and (c) the establishment of the dominant and pervasive ones. Such a system is built gradually, subject to change as new values are incorporated. This category is intended as the proper classification for objectives which describe the beginnings of the building of a value system. It is subdivided into two levels, since a prerequisite to interrelating is the conceptualization of the value in a form which permits organization. Conceptualization forms the first subdivision in the organization process, Organization of a value system the second.

While the order of the two subcategories seem appropriate enough with reference to one another, it is not so certain that 4.1 Conceptualization of a value is properly placed as the next level above 3.3 Commitment. Conceptualization undoubtedly begins at an earlier level for some objectives. Like 2.3 Satisfaction in response, it is doubtful that a

single completely satisfactory location for this category can be found. Positioning it before 4.2 Organization of a value system appropriately indicates a prerequisite of such a system. It also calls attention to a component of affective growth that occurs at least by this point on the continuum but may begin earlier.

4.1 CONCEPTUALIZATION OF A VALUE

In the previous category, 3.0 Valuing, we noted that consistency and stability are integral characteristics of the particular value or belief. At this level (4.1) the quality of abstraction or conceptualization is added. This permits the individual to see how the value relates to those that he already holds or to new ones that he is coming to hold.

Conceptualization will be abstract, and in this sense it will be symbolic. But the symbols need not be verbal symbols. Whether conceptualization first appears at this point on the affective continuum is a moot point, as noted above.

> Attempts to identify the characteristics of an art object which he admires.
>
> Forms judgments as to the responsibility of society for conserving human and material resources.

4.2 ORGANIZATION OF A VALUE SYSTEM

Objectives properly classified here are those which require the learner to bring together a complex of values, possibly disparate values, and to bring these into an ordered relationship with one another. Ideally, the ordered relationship will be one which is harmonious and internally consistent. This is, of course, the goal of such objectives, which seek

to have the student formulate a philosophy of life. In actuality, the integration may be something less than entirely harmonious. More likely the relationship is better described as a kind of dynamic equilibrium which is, in part, dependent upon those portions of the environment which are salient at any point in time. In many instances the organization of values may result in their synthesis into a new value or value complex of a higher order.

> Weighs alternative social policies and practices against the standards of the public welfare rather than the advantage of specialized and narrow interest groups.
>
> Develops a plan for regulating his rest in accordance with the demands of his activities.

5.0 CHARACTERIZATION BY A VALUE OR VALUE COMPLEX

At this level of internalization the values already have a place in the individual's value hierarchy, are organized into some kind of internally consistent system, have controlled the behavior of the individual for a sufficient time that he has adapted to behaving this way; and an evocation of the behavior no longer arouses emotion or affect except when the individual is threatened or challenged.

The individual acts consistently in accordance with the values he has internalized at this level, and our concern is to indicate two things: (a) the generalization of this control to so much of the individual's behavior that he is described and characterized as a person by these pervasive controlling tendencies, and (b) the integration of these beliefs, ideas, and attitudes into a total philosophy or world view. These two aspects constitute the subcategories.

5.1 GENERALIZED SET

The generalized set is that which gives an internal consistency to the system of attitudes and values at any particular moment. It is selective responding at a very high level. It is sometimes spoken of as a determining tendency, an orientation toward phenomena, or a predisposition to act in a certain way. The generalized set is a response to highly generalized phenomena. It is a persistent and consistent response to a family of related situations or objects. It may often be an unconscious set which guides action without conscious forethought. The generalized set may be thought of as closely related to the idea of an attitude cluster, where the commonality is based on behavioral characteristics rather than the subject or object of the attitude. A generalized set is a basic orientation which enables the individual to reduce and order the complex world about him and to act consistently and effectively in it.

> Readiness to revise judgments and to change behavior in the light of evidence.
>
> Judges problems and issues in terms of situations, issues, purposes, and consequences involved rather than in terms of fixed, dogmatic precepts or emotionally wishful thinking.

5.2 CHARACTERIZATION

This, the peak of the internalization process, includes those objectives which are broadest with respect both to the phenomena covered and to the range of behavior which they comprise. Thus, here are found those objectives which concern one's view of the universe, one's philosophy of life, one's Weltanschauung--a value system having as its object the whole of what is known or knowable.

Objectives categorized here are more than generalized sets in the sense that they involve a greater inclusiveness and, within the group

of attitudes, behaviors, beliefs, or ideas, an emphasis on internal consistency. Though this internal consistency may not always be exhibited behaviorally by the students toward whom the objective is directed, since we are categorizing teachers' objectives, this consistency feature will always be a component of Characterization objectives.

As the title of the category implies, these objectives are so encompassing that they tend to characterize the individual almost completely.

> Develops for regulation of one's personal and civic life a code of behavior based on ethical principles consistent with democratic ideals.
>
> Develops a consistent philosophy of life.

APPENDIX B

SUGGESTED BEHAVIORS DENOTING

SCIENTIFIC LITERACY

EXAMPLES OF AFFECTIVE GOALS IN BEHAVIORAL TERMS

Suggested Behaviors Denoting Scientific Literacy

(from "Summary Report NSSA-NSTA Workshops on Behavioral Objectives," issued in 1967)

At the Philadelphia regional meeting in 1967, each working group was presented with a set of statements and asked to identify specific overt behaviors which might be evident in scientifically literate citizens, to support the presence of the characteristics contained in the set of statements given them.

The capital-lettered categories, below, are based on those suggested by Bloom and Krathwohl.[1] The numbered statements were adapted from a list of ways suggested by Paul DeHart Hurd,[2] by which the scientifically literate person can be identified. The small-lettered statements are the expansions of these behaviors as formulated by the participants of the regional meeting at Philadelphia.

A. Awareness of conditions

1. relates personal requisite abilities, interests, and attitudes
   a. participates in extra-currirular science clubs and fairs
   b. selects a science-related summer job
   c. given an attitude or ability check list, can relate himself to the list as to a possible career in science.
2. appreciates the interaction of science and technology
   a. joins Junior Engineering Technical Society (JETS) or a rocket club
   b. gets a summer job in an industrial laboratory

---

[1] Op. cit., Handbooks I and II.

[2] From final report of the Second Working Committee on Conceptual Schemes of the National Science Teachers Association. 1968.

c. discusses social problems in terms of the relationship of science and technology, including automation

d. willingness to support scientific endeavors because of eventual technological applications

e. willingness to apply the scientific method to the solution of any problem

f. attempts to build equipment based on a learned concept

3. appreciates the interaction of science and the arts

a. designs and carries out a science project which relates science to music or art

b. composes music through computer programming

4. appreciates the limitations of science

a. limits conclusions to present data but verbally recognizes possibility of error

b. willingness to retest in the face of seemingly conclusive data

c. frequently challenges classmates or teachers who make authoritative statements, such as "science has proved. . ."

5. understands that science is generated by people with a compelling desire to understand the natural world

a. shows interest in and respect for famous scientific biographies

b. chooses a life vocation based on other than expected earning power

c. selects a biography of a scientist to fulfill a book report requirement in another subject

d. watches TV programs about scientists

e. shows respect for the ideas of scientists

f. recognizes that science is an enterprise of <u>human</u> beings

6. recognizes that science grows, possibly without limit (or: the processes of science lead to a never-ending quest for knowledge)

a. realizes that controversies are inevitable in the process of growth

b. evidences ability to live with change

c. upon learning the results of a study, states additional possibilities to investigate

7. recognizes that the achievements of science and technology properly used are basic to the advancement of human welfare

a. chooses a career of service in nursing, resource management, or other occupation utilizing science for human welfare

b. supports taxes for community solution of pollution problems

c. does not pollute air and streams, and practices conservation

d. participates in mass inoculation programs

e. supports public health agencies

f. contributes to research

g. has periodic physical and dental examinations

h. volunteers services for community organizations

8. recognizes that the meaning of science depends as much on its inquiry process as on its conceptual patterns

a. defines science as both a process and a way of explaining phenomena

b. can select appropriate investigative strategies to the solution of a problem

c. can identify and state a problem

9. appreciates the cultural conditions under which the scientific enterprise is promoted

a. accepts the concept that the social and economic climate will support or discourage the scientific enterprise

b. gives logical arguments for or against national policies for the planning of research

c. writes to congressmen urging support of legislation in favor of scientific research

B. Acceptance of values

10. rejection of myths and superstitions as explanations of natural phenomena

a. analyzes superstitions to see if they have scientific relevancy

b. collects data to determine degree of reliability of common superstitions

11. has the habit of considered response

a. volunteers recitation only when he has an organized relevant response

b. retains questioning attitude to permit adequate consideration possible options, and to permit a conscious plan of attack, clearly looking forward to a prediction of the probable outcome or solution

12. has the habit of weighing evidence to formulate a consideration response

    a. habitually consults more than one authority in searching for explanations

    b. identifies assumptions made as the basis of his decision-making and then questions their validity

13. realizes that science is a basic part of modern living (some participants thought this should be deleted)

    a. comments on pseudo science in advertising media

    b. when asked to comment on the conditions of modern living cites technological and scientific advances which lengthen life, shorten work week, etc.

    c. accepts science as a human intellectual endeavor which contributes to our society

C. Preference for values

14. curiosity

    a. frequently asks questions and challenges statement of others

    b. asks different people the same question

    c. applies multi-resources to one question

    d. often takes a second look

    e. goes out of his way to find answers

    f. reads numerous books and magazines

    g. habitually examines the working parts of equipment being used

    h. visits museums and industrial or food-processing plants

    i. initiates questions voluntarily

    j. exhibits awareness of discrepancies in his environment

    k. collects and orders the collection in some way

    l. includes reading about science and watching science based programs in leisure time activities

    m. uses all senses in making observations

15. patience

    a. is willing to wait for something worthwhile, i.e., data

    b. undertakes long-term projects where no immediate results are possible

    c. is willing to perform time-consuming procedures without attempting questionable shortcuts

16. persistence
    a. is willing to repeat an effort voluntarily
    b. redesigns experimental systems in an attempt to improve results

17. open-mindedness
    a. listens carefully when others are talking
    b. insists on hearing more than one opinion on one piece of evidence
    c. is willing to change ideas when new or additional evidence is available
    d. will give consideration to ideas which differ from his own

18. confidence in the scientific method
    a. follows instructions of doctor
    b. cleans out medicine closet periodically
    c. attempts to use scientific methods when making decisions
    d. looks for data or evidence before acting
    e. consults and considers consumer reports
    f. votes for elected officials on the basis of available evidence

19. "the search for truth" (nothing reported)

20. the importance of science for understanding the modern world
    a. enrolls in science courses

21. intellectual satisfaction to be gained from pursuit of science
    a. engages in investigative activity during leisure time
    b. asks about and shares his observations of similarities and differences in his environment

22. the desire to be creative
    a. participates in research on his own initiative
    b. offers realistic alternatives to a suggested method for doing something
    c. gets involved in independent study
    d. displays a variety of reactions or insights

23. enjoys science for intellectual stimulus and the pleasure of knowing
    a. gravitates toward idea-exchanging activities

APPENDIX C

EXAMPLES OF MEASUREMENT INSTRUMENTS

FOR THE AFFECTIVE DOMAIN

1. AN EXAMPLE OF A SEMANTIC DIFFERENTIAL
2. AN EXAMPLE OF A LIKERT-TYPE SCALE
3. AN EXAMPLE OF THE TRUE/FALSE INDEX
4. AN EXAMPLE OF A PREFERENCE SCALE
5. HEADLINES IN THE NEWS
6. HIGH SCHOOL ON T.V.
7. IF YOU HAD A VISITOR
8. A CHECK LIST FOR OBSERVATIONAL DATA

AN EXAMPLE OF A SEMANTIC DIFFERENTIAL SCALE

From: An Analysis of School Personnel Utilization Programs Goals and Objectives with Suggested Revisions, Olson & Beard (1971).

On the following pages, you will find a statement of a goal or objective and a group of adjectives. Evaluate the statement as a national goal or objective for the SPU program by the following procedure:

Check as follows if you feel that the statement is very closely related to one end of the scale,

rigid :_X_:___:___:___:___:___:___: loose

or

rigid :___:___:___:___:___:___:_X_: loose

Check as follows if you feel that the statement is quite closely related to one end of the scale,

weak :___:_X_:___:___:___:___:___: strong

or

weak :___:___:___:___:___:_X_:___: strong

Check as follows if you feel that the statement is only slightly related to one end of the scale,

broad :___:___:_X_:___:___:___:___: narrow

or

broad :___:___:___:___:_X_:___:___: narrow

Check as follows if you feel the statement is equally associated with both ends of the scale or if the scale is completely irrelevant.

proper :___:___:___:_X_:___:___:___: improper

(1) Place your check-marks in the middles of the spaces, not on the boundaries (i.e., :_X_:, not ___X___).

(2) Check every scale for every statement--do not omit any.

(3) Never put more than one check-mark on a single scale.

(4) You should be able to work at a fairly high speed through this questionnaire, but do not be careless because we want your true opinion.

GOAL EVALUATION INSTRUMENT

GOAL--To create institutional change by reorganizing the teaching and administrative staffs of elementary and/or secondary schools.

The idea expressed in this objective is . . . . . .

beneficial	:___:___:___:___:___:___:___:	harmful
appropriate	:___:___:___:___:___:___:___:	inappropriate
timely	:___:___:___:___:___:___:___:	untimely
feasible	:___:___:___:___:___:___:___:	infeasible
logical	:___:___:___:___:___:___:___:	illogical
realistic	:___:___:___:___:___:___:___:	unrealistic

The statement of this objective is . . . . . .

clear	:___:___:___:___:___:___:___:	unclear
understandable	:___:___:___:___:___:___:___:	confusing
meaningful	:___:___:___:___:___:___:___:	meaningless
adequate	:___:___:___:___:___:___:___:	inadequate

COMMENTS: Please list here any suggestions you have or problems you foresee concerning this objective.

AN EXAMPLE OF A LIKERT-TYPE SCALE

From: Attitudes Toward School K-12, Instructional Objectives Exchange, (1971).

SCHOOL SENTIMENT INDEX

Secondary Level

Description and Rationale

The School Sentiment Index consists of 83 statements regarding various aspects of school, to which students respond by indicating either strong agreement, agreement, disagreement, or strong disagreement to each. This self report device attempts to secure in a rather straightforward fashion, a student's responses to statements which pertain to five aspects of attitude toward school. Examples of each dimension (for which subscale scores may be obtained) are: (1) Teacher: "My teachers give assignments which are too difficult," (mode of instruction); "My teachers allow students some choice in what they study in class," (authority and control); "My teachers are interested in the things I do outside of school," (interpersonal relationships). (2) Learning: "I often buy books with my own money." (3) School structure and climate: "I enjoy the social life here." (4) Peer: "Students here aren't very friendly." (5) General: "Each morning I look forward to coming to school." From these examples it can be seen that if a student wished to answer untruthfully, in such a way that his responses might be viewed in a better light, it would not be too difficult to do so. Such tendencies to supply false responses can be minimized by utilizing as the administrator a person other than the classroom teacher, and by administering the measure anonymously.

SCHOOL SENTIMENT

Secondary Level

Directions: For each statement, indicate the extent to which you agree or disagree by marking the answer sheet:

A) if you strongly agree

B) if you agree

C) if you disagree

D) if you strongly disagree

For example:

I. My classes are too easy.

If you disagree with the statement you should mark C on the answer sheet as follows:

	A	B	C	D
I.	( )	( )	(X)	( )

There are no right or wrong answers, so respond to each item as honestly as you can. Do not write your name on your answer sheet.

1. My teachers rarely explain to me why I deserve the grades I earn on assignments and tests.
2. I do my best in school.
3. My teachers are interested in the things I do outside of school.
4. Each morning I look forward to coming to school.
5. My school has too many rules.
6. My teachers allow students some choice in what they study in class.
7. I often feel rushed and nervous at school.
8. My teachers give assignments that are too difficult.
9. Students here aren't very friendly.
10. My teachers try to make their subjects interesting to me.
11. I hate having to do homework.
12. My teachers are interested in what I have to say.
13. When I'm at school, I'm usually unhappy.
14. This school is run like a prison.

15. In most of my classes, individual students can choose assignments which are interesting to them.
16. If I did something wrong at school, I know I would get a second chance.
17. My teachers give assignments that are just busy-work.
18. I enjoy working on class projects with other students.
19. My teachers really like their subjects.

AN EXAMPLE OF A TRUE/FALSE INDEX

From: Attitudes Toward School K-12, Instructional Objectives Exchange (1971).

SCHOOL SENTIMENT INDEX

Intermediate Level

Description and Rationale

In this inventory, students respond by marking "true" or "untrue" to a series of statements regarding school, to indicate whether or not each statement is true about them. The statements involve student perceptions of, or attitudes toward various aspects of school, rather than a mere objective reporting of these aspects.

This self report device attempts to secure, in a rather straightforward fashion, a student's responses to statements pertaining to five aspects of attitude toward school. Examples of each dimension (for which subscale scores may be obtained) are: (1) Teacher: "My teacher makes sure I always understand what she wants me to do." (mode of instruction), "My teacher treats me fairly." (authority and control), "I like my teacher." (interpersonal relationships), (2) Learning: "I would rather learn a new game than play the one I already know." (3) School social structure and climate: "The principal of my school is friendly toward the children." (4) Peer: "I really like working with the other children in my class." (5) General: "I often get headaches at school." From these examples it can be seen that if a student wished to answer untruthfully, in such a way that his responses might be viewed in a better light, it would not be too difficult to do so. Such tendencies to supply false responses can be minimized by utilizing as

the administrator a person other than the classroom teacher, and by administering the measure in such a way that the anonymity of the respondent is both real and perceived.

SCHOOL SENTIMENT INDEX

Intermediate Level

Directions: On your answer sheet please show whether each of these sentences is true or untrue for you by marking "true" if the sentence is true or "untrue" if it is not true.

For example:

	True	Untrue	
1.	____	X	1. My class is too easy.
2.	X	____	2. I'd like to stay at my school always.

There are no right or wrong answers, so respond to each item as honestly as you can. Do not write your name on your answer sheet.

1. In school I have to remember too many facts.
2. I like to do school work at home in the evenings.
3. My teacher doesn't understand me.
4. I often get headaches at school.
5. The principal's main job is to punish children.
6. My teacher treats me fairly.
7. My teacher makes sure I always understand what she wants me to do.
8. I really like working with the other children in my class.
9. I would rather learn a new game than play one I already know.
10. I'm afraid to tell my teacher when I don't understand something.
11. I feel good when I'm at school.

12. I get scared when I have to go to the office at school.

13. My teacher unfairly punishes the whole class.

14. I get tired of hearing my teacher talk all the time.

15. School is a good place for making friends.

16. I wish my class could have this teacher next year.

17. I like trying to work difficult puzzles.

18. My teacher scares me.

19. I like to stay home from school.

20. When I have a problem on the playground at recess, I know I can find a nice teacher to help me.

21. I don't like most of the children in my class.

22. My teacher is not very friendly with the children.

23. The biggest reason I come to school is to learn.

AN EXAMPLE OF A PREFERENCE SCALE

From: Attitudes Toward School K-12, Instructional Objectives Exchange (1971).

SUBJECT AREA PREFERENCES

Secondary Level

Description and Rationale

The Subject Area Preferences inventory is composed of two parts: the first presents a list of eight subject areas commonly taught in the junior and senior high school and asks students to indicate those which they like and dislike very much; the second presents the same eight subjects and asks students to indicate whether or not each (1) is interesting, (2) is useful, and (3) has interesting textbooks and materials. The measure provides a straightforward descriptive index of student preferences regarding the various subject areas and a modicum of information regarding student perceptions of the strengths and weaknesses of each subject as it is taught in school.

SUBJECT AREA PREFERENCES

Intermediate Level

Directions: Show how you feel about the following subjects by marking:

L by those you like very much

D by those you dislike very much

Where you have no strong opinion, leave the space blank

You may mark L or D by as many subjects as you wish.

Do not write your name on this paper.

_____ English

_____ Arithmetic

_____ Social Studies (for example, history and geography)

_____ Art

_____ Music

_____ Physical Education (P.E.)

_____ Science

Directions: Below you will find seven school subjects, each followed by three descriptive phrases. If you think a description is definitely true about a subject, mark yes next to the descriptive phrase. If you think a description is definitely not true, mark no on the line. If you have no strong opinion, leave the space blank. For example:

Subject X

yes is interesting

_____ is useful

no has good textbooks and other materials

1. English

_____ is interesting

_____ is useful

_____ has good textbooks and other materials

2. Arithmetic

_____ is interesting

_____ is useful

_____ has good textbooks and other materials

HEADLINES IN THE NEWS

Intermediate Level

From: Attitudes Toward School K-12, Instructional Objectives Exchange (1971).

Description and Rationale

This inventory presents 10 sets of "headlines" from a hypothetical school newspaper; each set contains one headline representing each of several subject areas commonly taught in the upper elementary grades: social studies, science, mathematics, language arts, physical education, and art/music. Within each set, students select two headlines which they would most like to read about, and two which they would least like to read about.

The instrument is based on the assumption that students' preferences for various subject areas will influence their reading behaviors, influencing them to wish to read material related to preferred subjects. Students receive a profile of six scores, each consisting of the number of headlines in a particular subject area which he (1) indicates a desire to read about (2 points) or (2) has no opinion about (1 point). No points are given for those headlines which the student would least like to read about.

HEADLINES IN THE NEWS

Intermediate Level

Directions: Pretend your school has a school newspaper, written especially for the students. Many of the articles in the paper tell about things that have happened in the school. Some other articles tell of things that have happened outside of the school which students might be interested in reading about.

Each question below lists 6 headlines of articles which might appear in the paper. Which articles would you be most interested in reading? Which would you be least interested in reading? Put a + on your answer sheet to show the two headlines which sound most interesting to you. Put a 0 to show the two headlines which sound least interesting to you. For example:

I. a. + New Rocket Ship Built
   b. ____ Library Gets 100 New Books
   c. + Girl Wins Math Prize
   d. 0 Basketball Game Held
   e. ____ Class Visits Historical Site
   f. 0 Art Needed for Show

There are no right or wrong answers, so answer as honestly as you can. Do not write your name on this booklet or on your answer sheet.

1. a. _____ Explorer Finds Lost Land
   b. _____ Join the Map Club
   c. _____ Math Expert Uses Strange Number System
   d. _____ Free Books for Children Whose Parents Attend Open House
   e. _____ Television Features Basketball Event
   f. _____ Drawing Class for Children Begins

2. a. _____ Sally Smith Wins Girls' Relay Race
   b. _____ Children Needed to Count Tickets for School Event
   c. _____ New Science Fair Opens
   d. _____ Children's Art Show at Local Museum
   e. _____ Children's Stories Wanted for School Newspaper
   f. _____ City Hall Open to Visitors on Saturday

3. a. _____ Free Concert on Sunday
   b. _____ New Swimming Pool Summer Hours
   c. _____ Student Wins Spelling Contest
   d. _____ Mr. Jones' Class Tours City Hall
   e. _____ Chemistry Set for Sale or Trade
   f. _____ Four Students Win Arithmetic Awards

HIGH SCHOOL ON T.V.

Secondary Level

From: Attitudes Toward School K-12, Instructional Objectives Exchange (1971).

Discription and rationale

This measure presents students with twelve hypothetical situations in multiple choice form, each with three alternatives; some of the alternatives present favorably, and some unfavorably, the school social structure and climate. Students select the alternative which is most realistic, based on their own school experiences.

It is assumed that from the alternatives a student selects in these hypothetical situations, his attitude toward the social structure and climate of his own school may be inferred. Aspects of social structure and climate considered in developing the items include the administration, rule structure, openness of administrative system, and availability of extra help. Students are scored according to the number of alternatives selected which view the school social structure and climate positively.

HIGH SCHOOL ON T.V.

Secondary Level

Directions: You have been hired to write a television script about life at John Smith High School. The producer wants the script to be as close as possible to real high school life. It is your job to choose the most realistic details for the situations below. Put yourself in the place of the characters and try to choose details you know to be true from your own experience. Indicate your answer by marking a letter (A, B, or C) on your answer sheet for each item.

There are no right or wrong answers, so respond as honestly as you can.

Do not write your name on your answer sheet.

1. Dick and Jane are students at John Smith High. They are pretty good students,

   A.) but they feel that most of school is a waste of time.

   B.) like school and hope to continue their education.

   C.) but they hate every minute they're in school.

2. Jane comes to school in the morning and is called to the principal's office. She has been reported by a teacher because she broke a minor rule in the Dress Code (standards of acceptable dress for students). The counselor

   A.) explains the rule that was broken and warns her not to repeat the same mistake.

   B.) scolds her and warns her that if she breaks another rule, she will be suspended.

   C.) sends her home from school for the day.

3. Dick and Jane pass by the principal's office and notice that there is a large meeting there. The faculty and administration are discussing the school rules. They will:

   A.) close the meeting after deciding that the old rules worked before and will work again.

   B.) decide to invite some students to join their committee and give their opinions.

   C.) change a few of the rules after a long discussion.

4. Dick and Jane need to talk to their English teacher about an assignment. They go to her classroom to see her before class:

   A.) She is having coffee with another teacher and asks them to wait.

   B.) She is busy grading papers and tells them they're old enough to think for themselves.

   C.) She is busy, but makes arrangements to see them at another time.

5. Because of this stop at his English teacher's room, Dick is late for his gym class. He explains the reason for his being tardy to his gym teacher. The teacher:

   A.) reminds him that 2 more tardies will lower his mark in gym.

   B.) won't listen and sends him out to run 5 laps around the track.

   C.) excuses him, but asks that he bring a note from his English teacher tomorrow.

6. Dick and Jane meet for lunch near the cafeteria.

   A.) They hurry inside to get a place with their group of friends at their usual table.

   B.) They sit down at any available table because everyone is friendly and they like to meet new people.

   C.) They go to sit outside because no one will move over to give them room to eat.

IF YOU HAD A VISITOR

Secondary Level

From: Attitudes Toward School K-12, Instructional Objectives Exchange (1971).

Discription and Rationale

This instrument presents six hypothetical situations, asking the student to imagine that various people were visiting him. The student is given eight alternatives consisting of places he might like to show the visitor (a grocery store, a public park, his school, the bank, a department store, a post office, the restaurant nearest his home, the library), and asked to indicate the three places he would most like to visit and the three places he would avoid. Only the alternative "your school" is scored; in each situation students receive 2 points for a response indicating he would like to visit the school, and 1 point for leaving the alternative blank.

It is assumed that students who have pride in their school, and favorable attitudes regarding attending their school, will want to show the school to visitors. The situations are worded in such a way that students may perceive the hypothetical visitors as being differentially interested in visiting a school.

IF YOU HAD A VISITOR

Secondary Level

Directions: For each visitor described, choose three places you would be most likely to take him and three places you would be most likely to avoid. Put a "+" (plus) on the space next to the three places you would visit and a "0" (zero) next to those three places you would avoid.

Sample Item: A Martian has just landed from another planet. He takes you by the arm and points toward the city or town you live in. From what you can gather, he would like a tour. Choose three places you would take him and three places you would certainly avoid.

____A. A grocery store
____B. A public park
____C. Your school
____D. The bank
____E. A department store
____F. A post office
____G. The restaurant nearest your home
____H. The library

1. Your cousin from a distant state travels across the United States to visit you for three days. This relative is your age and has never been in your part of the country before. Choose three places you would take him and three places you would certainly avoid.

____A. The restaurant nearest your home
____B. A grocery store
____C. The bank
____D. The library
____E. A post office
____F. Your school
____G. A department store
____H. A public park

2. A European college student is staying with a friend of yours on a U.N. exchange program. Two days after his arrival, you and your friend decide to show this visitor around. Choose three places you would take him and three places you would certainly avoid.

____A. A department store
____B. The bank
____C. A grocery store
____D. Your school
____E. The restaurant nearest your home
____F. A post office
____G. The library
____H. A public park

3. A favorite uncle who is very successful takes time off from his business in a nearby city to spend the weekend with you. He says that he wishes to visit the places you enjoy the most. Choose three places you would take him and three places you would avoid.

____A. The bank

____B. A department store

____C. The restaurant nearest your home

____D. Your school

____E. A public park

____F. The library

____G. A grocery store

____H. A post office

4. A Japanese tour guide will be escorting your club to the World's Fair this summer. He arrives two days before the group departs to advise you on what clothing to pack for sight seeing. In his remaining time, the club will want to show him around. Choose three places you would take him and three places you would certainly avoid.

____A. Your school

____B. A department store

____C. The restaurant nearest your home

____D. A public park

____E. A grocery store

____F. The library

____G. The bank

____H. A post office

A CHECK LIST FOR EVALUATING BEHAVIORS RELATED TO AFFECTIVE GOALS

There is general agreement that there are many student behaviors related to the affective domain that are desirable, and there is agreement on many of the types of behaviors that are desired, but there has been little effort to see whether or not these behaviors are exhibited in a reasonable number of the students. Teachers spend hours and hours deriving precise numerical "grades" for cognitive behaviors, although such precision is probably unwarranted. On the other hand, many of these teachers attempt to evaluate the affective domain in the most haphazard fashion, if at all.

One possible solution to this problem is to develop a check list for evaluating the extent to which individual students show the desired behaviors, without attempting to provide numerical ratings or identify one-to-one relationships between behavior and affective goals.

No single student should be expected to exhibit each behavior, but each student might be expected to show evidence of one or more of the behaviors listed at reasonably frequent intervals. If a new list is used each month, it might be possible to compare a student's final month's performance with his performance earlier in the year.

HOW TO USE THE CHECK LIST

Write the students' names or numbers at the top of the check list and the desired behaviors down the left-hand margin; check the appropriate behaviors beneath the student's name or number whenever he is observed exhibiting them. Also, you may wish to use minus signs to indicate "nega-

tive behaviors" that are observed, that is, when the student exhibits a behavior that is the opposite of what is desired. Additional behaviors may be added in the blanks at the bottom of the page.

Desired Behaviors	Students' Names or Number
VERBAL BEHAVIORS	
Argues:	
Advocates desirable actions	
Defends desirable actions	
Criticizes plans and suggestions	
Asks:	
Inquires for further information	
Examines others' ideas by further questioning	
Explains:	
What others have said	
Personal ideas	
Principles and theories	
Reports on a science topic	
Reads:	
Science magazines	
Science books	
Science articles in the daily or weekly press	
NON-VERBAL BEHAVIORS	
Participates:	
Joins science clubs	
Participates actively in science clubs	
Contributes:	
Time to science projects	
Money to science projects	
Time and money to agencies attempting to improve man's environment	

Purchases:

Scientific reading materials

Science equipment

Borrows:

Science books

Science equipment

Selects:

Discriminates between useful materials and "gadgets"

Signs up for advanced science courses

A science-related career

Visits:

Science centers

Hospitals, health centers

Research laboratories

Assists:

In laboratory preparation and operation

Eats:

Nutritionally balanced meals

Repairs:

And adjusts science equipment

Builds:

Science-related equipment

Works:

Part-time in science-related job

(Other items should be added as needed.)

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